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ABSTRACT

The paper discusses an ecological model of assessment (i.e., one which examines the interaction between the child and his environment) and how it might be used with emotionally disturbed adolescents. A literature review focuses on current trends in assessment; the origins of the ecological perspective; and the ecological perspective in the school environment, in special education in general, and in the special education of adolescents. Research in the areas of ecological assessment, behavioral-ecological assessment, and behavioral-ecological programing is also reviewed. Some theoretical considerations for an ecological assessment model are discussed, including delineating the primary environments in which the child operates, and determining where there is a "poor fit" between child and environment which has led to the referral. An extended example is used to illustrate the ecological-behavioral assessment of adolescents, using an assessment model that is divided into five major phases: referral, expectations of the child's behavior, behavioral descriptions, summary of data, and establishment of reasonable expectations. (DLS)

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A Theoretical Model for Assessment of Adolescents: The Ecological/Behavioral Approach

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June 1975

Madison Public Schools
Madison, Wisconsin
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The research of Barbara Freedman on the social skill model of assessment was helpful and will become critical when a programming model is developed subsequent to the theoretical model presented here. This paper is in large part based on the work of the Re-ed project and in particular the work of Cantrell. The staff of the project gave freely to us of their materials and experiences and special appreciation is extended to them.

I. Introduction

The discussion which follows in this paper is concerned with an ecological assessment model in general, and specifically with how that model might be used with adolescents. The use of the word "ecological" may seem to some readers incongruous with assessment and at first readers may be uncomfortable with its use apart from the more popular reference to biological environment. However, as the reader will soon see in the review of the literature section, the use of "ecology" in reference to the interactions of people and their environments, is not new. Briefly, ecological assessment is used in this paper to refer to a way of looking at students which takes into account 1) the many settings or environments within which the student operates and 2) the interactions of that person with the several settings or environments within which he has been located. To someone with an ecological perspective, then, it is the interaction of the child and environment that is important. The child is never described apart from a setting (or environment). Therefore, it should be noted by the reader that labels such as emotionally disturbed or juvenile delinquent are incongruous with the ecological model presented in this paper. When these labels are used, it is for the purpose of clarifying the kind of behavior we are discussing. The discussions which follow in subsequent sections of the paper will amplify this very brief description presented here and will hopefully add clarity to the readers' understanding of an ecological assessment perspective.

The ecological approach presented here is not new or revolutionary to Madison Public Schools. Observations of a child in his classroom are often made as well as family histories taken and cooperative efforts between school and community

agencies initiated. The model suggested here, therefore, may in part be an extension of ideas already generated by MPS staff but placed in a systematic framework required when one undertakes the development of a theoretical model. Similarly, the model suggested here appears to be very compatible with the decentralization process already identified as productive by the Specialized Educational Services administration. Having support service personnel such as speech and language clinicians, social workers, and psychologists housed in school buildings rather than at the central administration building represents recognition of the fact that assessments of children are more helpful if completed within the context of the school environment by personnel familiar with that environment. This paper, because it is a further delineation and expansion of existing policy, represents a continuing effort to develop an ecological approach. As a result, this paper which describes an ecological assessment can be viewed as another product in this continuing developmental process within Madison Public Schools.

In addition it should be clear that the ecological model presented in this paper is an alternative method of assessment. There is no attempt on the part of the authors to infer that it is more "right" and the more traditional assessment is "wrong." Rather, we consider the ecological perspective a viable alternative which assists professionals in systematically looking at both the child and the environments with which he interacts.

For the co-authors, Gwynne Katz and Sherry Laten, the development of an ecological perspective is in some sense a product of a developmental process which had its origin in the frustration we encountered as the psychologist and social worker respectively, assigned to the High Intensity Program for the

Emotionally Disturbed (HI ED). HI ED whose student population is drawn from throughout the school district, was a Title III funded project, housed in Longfellow School. Students were from preschool through high school age who had been identified as needing a self contained program. Along the continuum of services, HI ED offered the most intense programming in Madison for students described as emotionally disturbed.

For us, the evidence accumulated quickly that the middle and high school students were not receiving programming which met their needs. The resignation of two unit teachers whose assignments were with our adolescents emphasized the general frustration all of us in the Unit were feeling in attempting to program for the adolescent population. We also knew that these students were often having difficulty in environments other than school e.g. community and home. We became acutely aware that a system needed to be arranged in which the adolescent was viewed from the perspective of all his environments, not just school.

Carl DeGraaf and Jack Schroeder, SES coordinators, and Title III staff people also felt that development of such a model was an important priority and permitted us to rearrange our schedule in HI ED to allow time to develop the model suggested in this paper. Without their support and flexibility, this paper and the ideas contained herein would never have come to fruition.

Research as well as our HI ED experience lend support to the less empirical feeling that we, Mr. Schroeder, Title III staff, and other MPS staff have felt, that is, that the development of a new assessment model for adolescents is imperative and must be a high priority. The human costs are high if this need is ignored. Fixsen, Wolf, and Phillips (1972) report on a longitudinal study by Robins (1966)

of 524 Caucasian children who had been referred to a St. Louis mental health clinic between 1924 and 1930. Robins' data seem to leave no question regarding the urgency for dealing effectively with adolescents. Robins reports after a follow up thirty years later that

> not only were antisocial children more often arrested and imprisoned as adults, but they were mobile geographically, had more marital difficulties, poor occupational and economic histories, impoverished social and organizational relationships, poor Armed Services records, excessive use of alcohol and to some extent, even poorer physical health... For antisocial boys the risk of future arrests was 71%, with almost half having frequent arrests and almost half having been incarcerated. For antisocial girls, the risk of divorce was 70% and for boys 50%... Antisocial behavior in childhood apparently predicts no specific kind of deviance but rather a generalized inability to conform and perform in many areas. (pp. 68, 70, 73)

We have used several sources of information in development of this paper. We felt sure that one useful direction in which to proceed would be to look at the literature to see if other people had developed both conceptual models for an ecological assessment as well as implementation descriptions. This search is reflected in the literature review as well as numerous references to other sources throughout the body of the paper. As the reader will discover in the review of the literature, much of the current ecological assessment literature comes from the mental health field and from the judicial and corrections literature. With the exception of a few isolated authors, public schools are not highly represented as yet in the ecological assessment literature.

In addition, contacts with professionals who have developed theoretical and/or have conducted research relevant to an ecological assessment were made. Professor William Rhodes, University of Michigan; Professor Robert Wahler,

University of Tennessee; Professor Roberta Ray of the University of Wisconsin and Dr. Barbara Freedman of the Division of Corrections, State of Wisconsin, were particularly helpful.

Finally, the few reports of exemplary projects using an ecological model were examined. The Re-ed project in Tennessee and North Carolina is probably the most comprehensive example of implementation of an ecological model. The input from Dr. Mary Lynn Cantrell, Coordinator of Training, Prevention-Intervention Project, Tennessee Department of Mental Health, and Ms. Alice Shannon of Cumberland House, one of the first Re-ed schools, was extremely useful. In fact, the model suggested here is a distillation of the Re-ed project materials combined with other research and theoretical materials.

This paper is divided into six sections:

I Introduction

II Literature Review

III An Ecological Model for Assessment: Theoretical Considerations

IV Collecting Data in an Ecological Model: Mapping the Ecology

V Toward an Ecological Assessment Model of an Adolescent

VI Decision Making: Postscript

II Review of the Literature

A review of the literature is useful when it traces the steps from which a conceptual framework has been developed. This review first focuses on the current trends in assessment and then deals directly with: the origins of the ecological perspective, the ecological perspective in the school environment, in special education, in general, and in the special education of adolescents. The review then addresses itself to the areas of ecological assessment, behavioral-ecological assessment, and behavioral-ecological programming.

As has been noted earlier, most of the literature on the ecological perspective emanates from the mental health and corrections fields. Up to now little information has been generated from a public school context. Historically, though, professionals have looked at the environments in which people live to gain a perspective from which to design interventions for individuals, families, groups, neighborhoods and communities. The Problem-Focused Model (Pincus, Minahan, 1973) addresses itself to an analysis of problems by looking at the different systems that interact and interface with any kind of problem.

Within the area of assessment of human behavior, three major changes have occurred. More assessments are being done on the behavior of couples, families, and small groups, when previously the emphasis was on evaluating individual behavior. Another trend has been to look at the social and physical variables that effect the individual behavior instead of assessing individual behavior in isolation. The third trend has been toward naturalistic evaluation i.e. systematically observing behaviors in the situations in which they characteristically occur. (McReynolds, 1975).

Ecological Perspective

An example of naturalistic evaluation or systems analysis is what has been termed ecological assessment. The full field of ecological psychology explores naturally occurring behavior within its own context. The analogy to biological ecology is not new. "For more than two decades a small but persistent group of scholars has been attempting to develop a field of inquiry called ecological psychology" (Stodalsky, 1975, p. 625). Original work in this area has emanated from the University of Kansas with Barker's publication of Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior and Recording and Analyzing Child Behavior by Herbert Wright.

Barker's interest is in the theory of behavior settings, places "one can enter where some general predictable set of behaviors will be occurring at a particular time." He feels the "patterns of behavior will be essentially the same regardless of who is in attendance." (Stodalsky, 1971, p. 627)

According to Stodalsky, Herbert Wright, on the other hand, presents theory and methods for studying "the stream of behavior." Both researchers present descriptive studies even though their original interest was to formulate theory which would allow predictions of behavior. Stodalsky (1971) concluded that although Barker and Wright early in their work had hoped to formulate theory which would allow for predictions of a person's behavior, it soon became clear that predictions for moment-to-moment behavior are not possible when only given detailed input on the setting in which a behavior occurs. Rather "some congruity between actions" over the long run was found but the moment-to-moment predictions of human behavior were abandoned.

Ecological Perspective of the School Environment

An application of principles and theory of behavior settings can be seen in the book Big School, Small School, (Barker, 1964) which addresses itself to the effects of school size on student participation in extra curricular activities. In the history of ecological psychology it represents an attempt to view the school from an ecological perspective.

Many researchers have acknowledged the importance of environment on the behavior of individuals in various settings (Barker, 1964; Lewin, 1939; Moos, 1970; Trickett and Moos, 1974). Much of the research, however, represents attempts to find correlates between the climate of the environment and various other variables or to describe a particular classroom by a designated adjective e.g. dogmatic, supportive. Randhawa and Fu (1973) have completed a review of the literature and the reader is referred to this source.

Ecological Perspective in Special Education

The literature reveals that an ecological approach has also been suggested for use in special education. Rhodes (1967, 1970) has suggested that the ecological model is applicable in the discussion of emotional disturbance. Central to the ecological model of emotional disturbance is the idea of reciprocity. Rhodes contends that any behavior which departs significantly from the cultural expectations and sanctions of the larger culture is seen as disturbed.

Further, it is the "subsequent agitated exchange between culture violator and culture bearer that creates a disturbance in the environment. It is this reciprocal product which engages attention and leads to subsequent action" (Rhodes,

1967, p. 449). In the ecological view, then, it is the "agitated environmental product" which can be addressed, a product in which both child and environment have a relationship to the problem, not just the child alone. He states that the "dis-ease" should be considered as much a condition of the responder as of the elicitor. Rhodes concludes that if the bilateral view of disturbance is accepted, the implication for management of the problem requires that "we address ourselves not only to the child, but to his living units and the individuals within his living units who are disturbed by his behavior" (Rhodes, 1967, p. 451). He feels strongly that too often the "labelers" way of dealing with a disturbing child is to lower their own level of stress rather than to solve the problem situation facing them.

If one then accepts Rhodes' premise of a reciprocity between excitor and responder in the defining of emotional disturbance, then a redefinition of the role of the special class teacher follows logically. Rhodes suggests that the special teacher must be freed

> ...from the bias and unwitting oppressions of the culture, in order to be able to recognize that even the most indulgent society can err in providing the conditions for the right relationship between the self and the culture... This teacher would become educator not only to the stressor but also to the strained members of the disturbed transaction... Specifically, this difficult role would require the teacher to enter into the living units in which the child functions. She would address him in the context of family, class, neighborhood and become teacher to this total context... In short she would become a teacher to his living units, modifying not only the child, but the crucial units which contain the child. (p. 453)

In a later article, Rhodes (1970) presents a community participation model of emotional disturbance in which he again emphasizes the necessity of looking at the contexts within which the child operates as well as looking at the child himself. He argues that there is a shift of the focus

> of disturbance from the child to an encounter point between the child and the microcommunity which surround him. It addresses itself to the ecological exchange nature of the disturbance. It searches for an intervention which will address itself to the shared process which is occurring between the child and the microcommunities he is encountering. (p. 310)

Rhodes emphasizes the sometimes cultural relativity of disturbance e.g. school may define the child as disturbed while in other socioeconomic or cultural contexts and with other responders he is considered appropriate.

Given a model of disturbance which emphasizes the interactive aspects of the child and his environment, Rhodes (1970) suggests that the

> ideal intervention measures would be those which enter the active disturbed situation, identify the point of convulsive encounter between the child and the surrounding human community, and then trace the problem as far as possible to its context both within the others in the context and in the cultural practices and artifacts of the microcommunity or ecological unit. (p. 313)

Rhodes (1970) concludes that ethically, "interventions into emotional disturbance should face the bilateral nature of the convulsive ecological exchange. Such intervention attempts should aim to change the quality and kind of exchange, ...by directly structuring more harmonious exchange designs through which the participating parties interact..." (p. 314) "The time has come," Rhodes warns, "to begin to concentrate attention upon changing the ecological conditions under which children have to live and grow..." (p. 314)

Implications of the ecological model for educational rearrangements of services extend beyond those of special class placement as suggested by Rhodes (1967, 1970). Kuriloff (1973) believes that the school counselor must become a "psychoecologist." As a "psychoecologist" the counselor observes and takes data on the entire system and all organisms which have contact with the child who initiated

the data collection. Like Rhodes, the child is "disturbing," not disturbed and represents a dissonance between the child and his environment. Similarly, the child is not necessarily always the client. Rather, the counselor decides where a minimum of input by the "psychoecologist" can result in maximum improvement of accommodation between child and his environments.

Ecological Perspective in the Special Education of Adolescents

Of particular interest here, is the application of the ecological perspective to special education and in particular the high school student population. In "The High School Culture: An Ecological Perspective," Trickett and Todd (1972) discuss four principles of biological ecology which they feel can be related to human ecological assessments. The principle of interdependence stresses that "the unique linkages (functional relationships) in the social environment of the school must be understood as a basis for assessing specific behaviors and social processes in that system." (p. 28) In sum, the principle of interdependence calls attention to the context in which a given behavior, role, or policy is embedded as a basis for understanding or changing it.

The principle of adaption "directs attention to the institutional and interpersonal requirements for effective coping." One needs to question the "norms that govern student" and adult behavior; "what rules and expected behavior constitute the hidden curriculum" (Jackson, 1968) that defines the socialization goals of the school, and what roles available to students will lead to attribution of status and accessibility to resources. The answers to such questions help clarify how the environment defines behavior as adaptive or maladaptive. (p. 29)

Cycling of resources in a school is dependent on the quantity and quality of resources available for defining problems, meeting immediate needs and developing competencies.

The succession principle "stresses the time perspective in viewing the evolution of schools as they respond and adapt to surrounding social, technological and demographic changes." "It suggests the continuous scanning of the environment to assess potential problems and identify potential opportunities." "The succession principle helps to find the means by which the social environment assesses and copes with the impact of its changing surroundings." (p. 30)

Trickett and Todd suggest that "making sense out of the complex and diverse school culture is a prerequisite to maximizing its positive effort on adolescents."

They also warn that although in the short run it may be more efficient to the smooth administration of the school to view the deviant behavior "as in the child", the ecological approach, indeed perhaps the long-range view, demands that deviant behavior is viewed as an indicator of problems in the "fit" between individual needs and social structure. The authors further remark that in respect to the high school culture,

> an assessment of student subcultures may have a variety of useful results. First, it may provide a more appropriate context in which to evaluate some forms of deviant behavior.... A second result of this kind of analysis is that it provides a view of the opportunity structure or channels to adult competence which the school provides.... The school which is committed to meeting its responsibilities must formulate its role in terms which have some meaning and value within the subculture. (Trickett, 1972, p. 34)

Ecological Assessment

As did Barker, Trickett and Todd (1972) emphasize that individual behavior varies from setting to setting, that a behavior has to be considered in the context of the setting. This concept leads to several important questions regarding assessment:

1. "In how many and what kinds of settings does a given behavior occur?
2. How many and which of the participants in the setting express the behavior." (p. 30-31)

Trickett and Todd (1972) also conclude that an ecological assessment requires that not only must formal and informal resources for problem solving be identified, but a weighing of the immediate and future value of these resources is a central focus of the ecological analogy. (p. 34)

Various discussions for collecting data on school environments are reported in the literature. Majoribanks (1972) developed a measure of learning environments. The interview schedule consisted of eight subscales: press for achievement, press for activeness, press for intellectuality, press for independence, press for English, press for language, father dominance and mother dominance. Trickett and Moos (1974) presented an assessment of the psychosocial environment of high school classrooms and described those environments' relation to student reactions in the class. These investigators were able to demonstrate that differences in classroom environment were systematically related to differential student satisfactions and moods. For example, significant relationships were found between Satisfaction with the Teacher and Teacher Support (of students as people), Innovation (in teaching approaches) and Student Involvement in the class.

Trickett and Moos (1974) found essentially no relationship between the perceived environment of the classroom and satisfaction with school in general.

Because of the numerous extra-classroom influences on adolescents in schools the authors conclude that "determining what aspects of school bear most heavily on adolescents is a salient research concern." (p. 9) The Classroom Climate Questionnaire (Walberg, 1969) was developed but because psychometric studies found that the questionnaire was unreliable, Walberg began work on the Learning Environment Inventory. The inventory consists of 14 scales each with 7 items describing characteristics of the class. The 14 scales are intimacy, friction, cliqueness, satisfaction, speed, difficulty, apathy, favoritism, formality, direction, democratic, disorganization, diversity, and environment.

More recently Trickett and Moos (1973) have developed a classroom environment scale (CES). As described by the authors, the CES

> focuses explicitly on the psychosocial environment of the high school classroom and conceptualizes that environment as a dynamic social system which includes not only teacher behavior and teacher-student interaction as well... Rather than using ratings of outside observers, the classroom environment in the present study is defined in terms of shared perceptions of persons in that environment. (p. 94)

The CES is specifically written for assessing the social climates of junior high and high school classrooms. There are three forms of the scale, one which assesses how that class really is perceived, one how the class is expected to be and one that asks responders how their ideal class would be. The authors suggest that their instrument "has important implications for the assessment and prediction of behavior. If one can assess empirically the environment of the classroom, one can study the effects on students of being in a particular classroom..." (p. 100)

Behavioral-Ecological Assessment

Hobbs, in The Futures of Children, 1975, presents a somewhat different ecological perspective. In his chapter, "Proposed Model for Classifying Children", he talks about alternatives to traditional classification. He proposes a profile describing the "child's physical attributes, including salient features of his medical, psychological and educational situation. It would specify what he can or cannot do or learn; important people in his life and those who are to carry out the plan." (p. 105) Hobbs states that the child is no longer the sole focus of assessment and intervention, rather the problem is seen as residing in an ecological system of which the child is an integral part. (p. 105)

Similarly, a review of the literature demonstrates that other behaviorists have begun to address assessment from an ecological perspective.

"The Heuristic: An Explanation", by Cantrell, gives a thoughtful explanation of an ecological approach to assessment. She talks about the discrepancies between how the child is functioning and the expectations that other people have for him. The first step in her model of ecological assessment is to map out the discordances in terms of the settings in which they occur and with which behaviors they are associated. Another ecological map would outline the resources available within the child's immediate environment as well as in the broader community. Planning the intervention would take into consideration that the most effective and economical resources are those that are closest to the child.

Congruence occurs when the child meets the expectations of his environment. Cantrell outlines three ways in which that congruence can occur.

1. the environment changes its expectations of the child

2. the child develops the necessary skills to meet those expectations.

3. a combination of the above.

It is recommended to the reader that the Cantrell article be read in its entirety.

Wahler and Cormier (1979) also take a behavioral ecological approach to assessment. They state that an adequately prepared clinician must be a skilled "ecologist;" the professional must be skilled in mapping the child in his social environment. The interview focuses on the different behaviors that occur in different settings, emphasizing that behavior and its consequences are situation specific. It is Wahler's and Cormier's assumption that the child's behavior, as well as others, is the target of change.

Kanfer and Saslow (1969) outline key questions they seek answers to. These are:

1. What behaviors need change because of the frequency, intensity, duration, or because of the setting in which they occur?

2. Under which conditions were the behaviors acquired and what is maintaining them?

3. What are the best practical ways that change can be produced?

4. What have been the biological, social, educational and behavioral changes?

5. Who are significant others?

6. What are the social milieu and cultural norms?

7. What were the behavior patterns prior to the referral? (pp. 443, 444)

Dr. Freedman (1974) addresses herself directly to the area of assessing the social competencies of adolescent boys. Freedman's dissertation "An Analysis of Social-Behavioral Skill Deficits in Delinquent Boys", applies "a social skills

learning model to the assessment of the behavioral problems of delinquent boys. According to the social skills training model (McFall 1971 in Freedman, 1974) maladaptive behavior is construed in terms of the absence of specific response skills." (p. 1) Social skills assessment would include both criterial analysis of the response skills that lead to competent functioning in specific social situations as well as identification of the skill deficits in the given repertoire of the individual being evaluated.

In Freedman's study an inventory of situation specific, criterion-referenced items has been developed which is capable of differentiating delinquent from non-delinquent adolescents. It is an analysis of the social-behavioral skills necessary for competent functioning as an adolescent.

Freedman (1974) reviews from an historical framework other approaches to assessment of delinquent behaviors. She points out that the psychoanalytic orientation to assessment "has been described as invalid and unreliable (e.g. Mischel 1968; Peterson 1968; Zubin Eron and Schiamer 1965 in Freedman, 1974)" (p. 3). Researchers then tried to develop systems of global categories into which individuals could be sorted" (e.g. Block and Flynn 1956; Jenkins and Hewitt 1944; Lindesmith and Dunham 1941 in Freedman, 1974). This attempt has been found to have limited utility also. (p. 4)

According to Freedman, (1974) Quay and Parsons (1971) derived a more structured typology than the ones described previously. This assessment tool was somewhat successful in discriminating different dimensions of delinquency. Its greatest disadvantage is that it only focuses on assessment and does not suggest any differential treatment based on the assessment.

"The second of the more widely used typologies is the Interpersonal Maturity Level classification system, a theoretically derived cognitive-developmental formulation (Warren 1966 in Freedman, 1974, p. 6)." It does specify differential treatment plans, but the treatment programs are not geared to changing specific observable behaviors in specific situations.

The reader is referred to Freedman's dissertation for a more detailed discussion of a "Critique of Traditional Approaches to Assessment," "Social Learning Approach to Assessment," and "Social Behavioral Assessment and Delinquency."

Freedman's major concerns about traditional approaches to assessment are that they assume that people behave consistently across different situations and that an individual's behavior can be predicted by understanding the person's underlying personality dynamics. These are assumptions that empirical literature do not support (Megargee 1966; Mischel 1968, 1971 in Freedman, 1974). She is also concerned that traditional assessment tools do not relate assessment to the treatment of directly observable behaviors.

Freedman points out and discusses rather extensively that her observation and descriptions of delinquent behavior are very similar to the descriptions that others have made of this population for many years. Though, when it comes to conceptualizing and analyzing the causes of delinquency and the possible interventions to be tried, she dramatically diverges from the methods of others. The reader is again referred to her dissertation for further discussion.

Some useful assessment tools are being developed that deal specifically with certain areas of the adolescent's life. Richard and Frieda Stuart (1975) have developed a "Family Pre-Counseling Inventory Program." It is an assessment tool which is directly tied to treatment. It focuses on each family member's

"1) positive perceptions of the others and himself, 2) perceptions of positive and specific changes which need to be made, 3) assessment of decision-making, communication and behavior exchange processes within the family." (p. 2) The mother's questionnaire also includes a section called the family locater, which provides a description of the ecology of family life. The family locater can also "lead to an indirect measure of the extent of commitment which each member feels toward family activities." (p. 3)

The question of how workable a family will be following intervention is considered by Reid and Hendricks (1972). In their article "Preliminary analysis of the effectiveness of direct home intervention for the treatment of predelinquent boys who steal they found that "1) children referred for treatment of social aggression who also steal were helped significantly less than the non-stealers; 2) the higher the rate of deviant behavior demonstrated by a child, the more likely he will respond to the social-learning based treatment offered at Oregon Research Institute." (p. 211) Some possible reasons why predelinquent boys who steal did not respond as well to this type of treatment could be related to other characteristics such as that "stealers do not exhibit high rates of observable, out of control behavior and that generally families of stealers demonstrate low rates of positive friendly behavior, i.e. suggesting that stealers and their families are rather distant, having only loose social ties with one another" (p. 215).

Oregon Research Institute's experience with families of children who steal has been that it is extremely difficult to keep the parents committed to the treatment program. They have found the following procedures to be somewhat successful: "an initial external incentive for the family to change (such as money), extensive

training in intra-family relations of a general nature; training the parents to monitor or track their children; and finally programs to alter the stealing itself." (p. 218)

Barclay (1973) describes the Barclay Classroom Climate Inventory (BCCI). This inventory "employs three methods of assessment: self-report, peer nominations, and teacher judgments." (p. 340)

> Under the self-report section it includes a portion relating to self-competency skills (I can run fast, I like to listen to others, etc.), a section relating to reinforcers (candy, money, doing somethings fun with parents, etc.), and a section relating to vocational awareness (interest in various occupations or skills relating to such occupations). The peer section is composed of 28 group nominations that relate to who can do a specific activity the best within the choice range of that classroom (who can run fast, who likes to listen to others and the like). Only one person can be nominated for each skill. The skills are similar to those contained in the self-competency scales with the exception that there are items relating to reticence and disruptiveness. The final method is the teacher input. This consists of 62 adjectives which are distributed into areas relating to stable and unstable extroversion and stable and unstable introversion. Teachers check only those adjectives that appear typically characteristic of the child. (p. 340)

This assessment tool has been developed for grades two through six. The BCCI has been adapted so that computers can be used for storage and analysis of data.

Behavioral-Ecological Programming

The literature illustrates that an ecological perspective and assessment can be intimately tied to treatment. The most complete incorporation of an ecological assessment model into a plan of service for adolescents is the Re-ed project (Weinstein, 1969). The project was established under the joint sponsorship of the National Institute of Mental Health, the state of Tennessee, the state of North Carolina and George Peabody College for Teachers and is centered in two

project Re-ed schools, Cumberland House Elementary School in Nashville, Tennessee, and Wright School in Durham, North Carolina. The "schools offer a short-term residential program for school age, pre-adolescent children who are too disturbed or disturbing to be maintained at home or in a regular school, but who do not require hospitalization or constant surveillance." (Weinstein, 1969, p. 703) See Hobbs, 1966 for complete history of Re-ed.

Three articles about the Re-ed Project, Hobbs (1966); Lewis (no date); and Zax and Cowen (1972), discuss its need, philosophy, development and preliminary evaluation. Essentially the articles address themselves to the increasing recognition of the gap between the number of children needing special help and the professional services available to them. All three articles seem to be concerned with the lack of efficacy of traditional, psychiatrically-oriented treatment programs for children and their approach to treatment which entails long residential care.

The major concepts involved in the development of the Re-ed project revolve around the behavioral-educational and ecological model:

1. It is an attempt to construct a new mental health role and in addition a new institutional context for the implementation of that role. The role is that of an educator, broadly construed, working toward the attainment of limited, carefully defined goals related to increasing the social competence of emotionally disturbed children. The institutional context is a residential school that keeps its program, and the goals it sets for children, carefully articulated with the natural habitat of each child it serves. (Lewis, no date, p. 1)
2. "The program operates on the assumption that children have acquired non-adaptive ways of relating to adults and to other children." (Hobbs, 1966, p. 1105)
3. "Competence really makes a difference." (Hobbs, 1966, p. 11110) Competence is not only limited to academics, but includes a whole range of social, recreational, leisure time and athletic skills.

4. Competence also includes the ability to deal with ones emotions.

5. Competence also includes the ability to control ones own environment and to have self-control.

6. To achieve competence, each day is structured to optimize the children's success.

The ecological perspective of Re-ed includes the following concepts:

1. "Children are an inseparable part of a small social system of an ecological unit made up of his family, school, neighborhood and community." (Hobbs, 1966, p. 1108)

2. "Re-ed becomes a part of the ecological unit not as an autonomous treatment facility but more as an adjunct to existing services for as brief a time as is necessary." (Hobbs, 1966, p. 1108)

3. The goals are not to "cure" children, but to make a small social system work. The focus is always on how to change variables in the natural environment so that it is a more productive place for children. When a child is accepted into the program plans are already being made for his release.

4. From an ecological point of view, the discrepancy between the child's behavior and what his environment expects of him is actually the problem, rather than the symptoms themselves being the problem.

5. Because of the ecological bias in appraising children's problems, the data gathered to help evaluate the effectiveness of Re-ed schools leans heavily on perceptions of the child by those who are in his natural environment. (Lewis p. 17) For more complete evaluation data on Re-ed see Weinstein, 1969.

The Liaison Teacher-Counselor In A Re-education School is a comprehensive document outlining the philosophy and functional analysis of the liaison role, the Re-ed Program development, implementation and requirements of a liaison teacher-counselor. The monograph points out that the role of liaison teacher-counselor can be performed by a variety of professionals. The title of the professional is not important, his/her functions are. The reader is referred to this document for a more detailed, but concise description of the program.

Currently, the Prevention-Intervention Project is being developed to field test in a public school setting the teacher-counselor professional roles that are currently active in Tennessee's mental health's residential schools (personal communication, Cantrell, 1975).

The project is being introduced into five Tennessee school systems and is finishing the first year of a five-year plan. As the description of the program is written: "the program emphasizes the prevention and remediation of behavioral, academic and other ecological problems in early elementary and junior high school aged children..." (personal communication, Cantrell, 1975) Project objectives are accomplished through the establishment of two-person teacher teams who bring to regular classroom programs the support necessary to bring about congruence between the child's competencies and environmental expectations for those skills.

Overline and Quayle (1971) attempted to apply the ecological approach of Rhodes to an assessment model of learning disabilities. In a preliminary description of the Downriver Learning Disability Center, the authors emphasize that their approach to learning disability is that although it represents deviance, that deviance does not exist exclusively within the child. Rather, "it is evidence of a faulty interaction between the child's available learning modalities and his educational ecosystem: teachers, peers and the primary emphasis on reading as a requirement of the various behavior settings contained within the school." (p. 28) The project originally was funded with Title III money, but now has other funding. "It is a system's approach to learning disabilities placing its major focus on the facilitation of unit adaptability in accomplishing educational change." (p. 29)

The target population for the Center is the regular classroom teacher in order to help her begin to identify and manipulate the variables in the child's classroom environment to better facilitate learning. This goal is accomplished by offering intensive inservice training and consultation services to assist in planning for the child. Parent training was later added to the services of the Center when it became clear to Center faculty "that they could not ignore the dynamics of the home setting.... In many cases learning problems not caused by family dynamics were certainly exacerbated by them. The interactional patterns in the home could either inhibit or facilitate the prescription written for the child." (p. 32) Although the focus on an ecological approach to learning disabilities remains a primary one of the Center, the implementation of that focus has changed somewhat (personal communication, December, 1974). Currently, the staff is developing modules for the training of regular classroom teachers and are spending less time in direct evaluation of children.

Overline and Quayle (1971) conclude that "any attempt to evaluate such an approach...must...be in terms of subsystem modification as well as structural changes rather than focusing upon academic gains of individual children." (p. 32)

Atthowe's article (1973), like many of the other articles which address themselves to a behavioral-ecological treatment model, essentially deals with the issues of how to maintain behavior change within the natural environment. Atthowe proposes that professionals have been unsuccessful in maintaining change because they have "not attempted to control the eliciting conditions and reinforcers in the person's natural environment, which is the maintaining milieu;" (p. 5) "If we wish to rehabilitate individuals, then we have to modify not only the person, but his relevant environment." (p. 6) He feels professionals need a model

which is concerned with both behavioral and social changes. Atthowe suggests that the rehabilitation specialist must deal with those individuals in power who have the resources to make changes in the social systems. "He must become aware of the overt and covert leaders and the reinforcers and contingencies that hold a community together, as well as the pressure points." (p. 10)

Because Atthowe has a wide ecological perspective he proposes guidelines for setting up programs so that staff and community members involved feel productive, and excited about their work.

He then describes Operations Re-entry (Atthowe and McDonough, 1969) as a remotivation program for chronic schizophrenics to transition and live outside the hospital. As patients are shaped to work their way through such a program the reinforcers, social and monetary, become more and more like those that the social system outside the hospital can provide. Likewise, patients become more and more independent and responsible by earning their way out of the institution. Living settings become increasingly like the natural environment i.e. the regular ward, then the self-help ward, then group living in the community, followed by independent living. Patients who are in the more independent living arrangements serve as models for the other patients.

"Generally recidivism rates among most institutional populations vary from 65% to 50% in the first year (Atthowe, 1973, p. 17). The recidivism rate for Operation Re-entry was only 12% (p. 18) for the same time period. Atthowe emphasizes in order to do effective treatment professionals need to look at the persistence of their methods and the entire ecological system.

In juxaposition to Atthowe is O'Leary and Kent (1972) who also address the issue of the longevity of treatment programs. They feel that some professionals

believe that treatment will only have long term effects if people in the client's environment reinforce the new behaviors. O'Leary and Kent contend that such a position renders efforts for long term social change unimpressive and impractical." (p. 71) They feel that professionals must focus on teaching people "overt social skills with (only) some manipulation of the environment." (p. 71) The question concerning generalization could then be, "Are you programming your clients well enough so that the natural environment, with some consultation from you, maintains the appropriate behavior of your client?" (p. 71)

Summary

As the literature suggests, an ecological perspective, viewing man's social interaction with his environment, is not a new direction to investigate. Throughout the last twenty years there have been consistent contributions to this theoretical perspective. However, what has been lacking, until recently is a translation of theoretical notions into more practical applications to the area of ecological assessment. The Re-ed and Prevention Intervention Projects as well as "An Analysis of Social-Behavioral Skill Deficits in Delinquent and Non-Delinquent Adolescent Boys" are superior examples of this new direction which integrates assessments with intervention. Even more apparent from the literature, is the lack of reports from the public schools of use of an ecological perspective. Even fewer reports exist of its direct use in the assessment of adolescents.

III An Ecological Model for Assessment:

Theoretical Considerations

A non-ecological approach to assessment looks at the child within the environment where there has been a complaint. Thus, the child's adjustment is evaluated in the school setting when the teacher has identified that there is a problem in the classroom. The child is not assessed in respect to his behavior in the community, in the family or in classes of other teachers.

Similarly, in these assessment procedures, it is the child that is assessed. This model assumes that there is something wrong within the child, something disturbed, that must be diagnosed, then remediated. The remediation assumes that since the problem is within the child, the remediation of the problem is also within the child. The child must change according to this model. The "abnormal behavior" must adjust to a "normal environment."

An ecological approach to assessment examines the interaction between the child and his environment. It does not assume that there is something wrong necessarily with the child that has to be "fixed" so that he can again be returned to his classroom. Rather, it assumes that there is a poor fit in the interaction between the child and the environment from which there has been a complaint. Johoda (1961) has suggested that "a match or best-fit of individual to environment is viewed as expressing itself in high performance, satisfaction, and little stress in the system whereas a 'lack of fit' is viewed as resulting in decreased performance, dissatisfaction and stress in the system" (p. 56). Because emphasis is on the lack of fit between a specific environment and the child, it is not assumed that

there is a lack of fit between the child and all his environments nor is it assumed that the child is necessarily the one that needs to be changed in order to improve the fit. It may be that the variables in the environment may be more reasonably manipulated to improve fit.

Following Rhodes (1967, 1970), an ecological model of emotional disturbance would assert that someone is described as disturbed because someone considers him disturbing. The disturbance is not seen as within the person but is conceptualized as existing in the transaction between the person and his environment.

For example, John was referred because of "his lack of control" by his tenth grade English class teacher. According to the teacher, John spoke belligerently to her and in general, spoke out in class or refused to do work. When the support staff member observed him in class he noticed that John seemed to be talking to one girl in particular. The psychologist also noted that only one other teacher, the math instructor, had expressed concern about John's talking back. When the psychologist checked the class lists of the two classes, he found that the girl was in both classes but was not in John's classes where there had been no teacher complaints. Hypothesizing that John may be behaving in the "disturbing" way because of the girl, he suggested to both teachers that the two students be separated. With John and the girl separated, both teachers reported significant decreases in the disturbing behavior. Although the preceding example is somewhat simplistic, to be sure, it does illustrate the concept of disturbing behavior existing because of a lack of fit between person and environment. The lack of fit was John's lack of a comfortable interaction with an environment that had him sitting next to a girl who encouraged him to act inappropriately. When the environment was changed e.g. John was separated from the girl, John's disturbing behavior decreased.

A further example might be helpful. Debbie had repeated first grade. In February, Debbie's current first grade teacher referred Debbie for evaluation because of a continued lack of progress in reading. When the support staff member worked with Debbie it was found that she learned best when there was no noise, that she became confused when auditory distractions were introduced. In addition, Debbie demonstrated a difficulty discriminating between sounds of letters presented to her orally sometimes described as an auditory discrimination difficulty. However, she remembered words and letters when given flash cards. Debbie's school was a wall-less school where classes were open both to the walkway and similarly open to other classes. The reading program the teacher was using with Debbie could be described as using primarily a phonic approach.

An ecological approach to assessment examines the interaction between Debbie's school environment and Debbie. The environment was an open school situation with the opportunity for various distractions from other classes and pedestrian traffic. Included in her school environment was reading instruction by the phonic approach. There was a poor fit between Debbie and her learning environment because Debbie had difficulty learning when there were auditory distractions as must have occurred often in her school. In addition, there was a poor fit between a learning environment which was using a phonic approach to reading and Debbie's difficulty with auditory discrimination. A move to a walled classroom which would decrease noise and a switch to a sight, whole word approach to reading might provide a better "fit."

Debbie's case is illustrative of the ecological approach. The focus is the interaction between the environment and the child. In Debbie's case it was a change in her environment which resulted in a better "fit" between environment

and child. Also, it should be noted that rather than describing Debbie only in deficit terms: auditory discrimination difficulties and confusion when auditory stimuli are increased, the description also noted under what conditions learning did take place and it was from both observations that an intervention was suggested e.g. switch to a walled class and to a sight, whole word approach to reading.

An ecological assessment program, then, is one which focuses on the interaction of the child and all his environments. The focus is not solely on the child to determine his deficits as an explanation for his educational problems. Rather, it assumes that if there has been a complaint, that complaint represents a lack of comfortable fit between at least one of his environments and the child. Implicit in such a model is the requirement that the professional look at all the environments with which the child interfaces, not just the one from which the complaint emanates. Similarly implicit in this model is the understanding that the role of assessor can be performed by many different people either assessing separately or co-temporarily. Thus the child may be involved in assessing his environments as well as teachers and other school professionals, parents, peers, and community agents. Not only do the several perspectives add reliability to the eventual assessment product, but discrepancies between several assessors can be identified. The importance of discrepancies to the model presented here will be discussed later in this paper. Appropriate intervention may be with the environment, child or both.

Like the Re-ed project (Liaison Teacher-Counselor, no date) one of the biases of the ecological model presented here is that "emotional disturbance" can be described in behavioral terms. To have a child described as aggressive only is not sufficient to describe him as emotionally disturbed. A salesman is described

as aggressive and it may be considered admirable and result in a promotion. However, it is the hitting of other children, the kicking of furniture, the throwing of books that may be disturbing. It is the behavior that can be seen that is of concern. Indeed, a child may be feeling hostile but it is the hostility expressed in behaviors such as kicking at the door and the teasing of younger children that are of concern. This model deals only with behaviors that can be seen and described precisely.

The ecological aspect of the assessment looks at the appropriateness and competence of the behavior. (Liaison Teacher-Counselor, no date)

The appropriateness or inappropriateness of a behavior can only be defined by examining the environment within which the behavior is exhibited. What is appropriate in one environment may be inappropriate in another. While cheating may be inappropriate in the classroom and in the society at large, cheating in some form such as shoplifting may be viewed as appropriate by an adolescent gang.

Ecological assessment also looks at the competence or incompetence of a behavior. (Liaison Teacher-Counselor, no date) Competence is the level of skill demonstrated when performing a task. Thus, an evaluation might include an examination of the child's social skills, academic skills, leisure time use, skills in relating to parents or skills in the community. The literature review delineates some of the variables which have been identified as important in the assessment of adolescents. In particular note the work by Freedman (1974) and Trickett (1973).

Appropriateness and inappropriateness, competence and incompetence are related to three ecological factors (Liaison Teacher-Counselor, no date): expectations, the nature and structure of a task and the contingencies of reinforcement.

Expectations are based on the behaviors which other people in the child's environment anticipate in a given situation or what the child himself expects for others and himself. When the other people in the child's ecology and the child agree on a definition of a behavior as appropriate or inappropriate or competent or incompetent there is harmony in the child's environment. No one is complaining since the expectations of people in the ecology and the child's behavior are compatible. There is a "smoothness of fit" between child and environment. However, when there is a discrepancy between expectations of the environment and the child's behavior or between what the child expects for himself and what others expect of him, there is an uncomfortableness of fit between environment and child. This is the situation that may evoke a complaint from the environment because there is a disturbance in the interaction between some component of the child's ecology and the child.

For example, a first grade teacher complained that Eric was always out of his seat, did not complete papers in the order in which she had told him they were to be completed and generally seemed disinterested in the activities the teacher planned for him. Upon observation in the classroom, it was noted that work periods were 30 to 45 minutes long during which the children were expected to be in their seats. Eric was, indeed, out of his seat approximately one-quarter of that time but his activity was not to bother other children. Rather, it was to sharpen a pencil, get a drink or sometimes to stroll around the room and return to his seat. It was noted that while he was in his seat he was attending to the task despite the teacher's report of disinterest. In view of the analysis presented in this paper, the teacher's complaint was a result of a discrepancy between the teacher's expectations of Eric and Eric's behavior. Viewed in isolation,

Eric's behavior was not disturbing; he was not loud, touching other children, etc; rather, his behavior was disturbing because it represented a lack of "fit between teacher expectation and child behavior." What is important here is that Eric is not disturbed, Eric's ecology is disturbed. The focus is the interaction between Eric and the first grade classroom environment. Returning to the original discussion of appropriate and inappropriate: Because of this identified discrepancy in expectations, Eric's teacher has identified his behavior as inappropriate.

A similar scenario could be written to illustrate the role of expectations in defining competence and incompetence. Competence is thought to exist when there is a match between expectations of the people within the child's environment and his skill level. When there is a discrepancy between these two, the interaction is disturbed and incompetence may be said to exist. Again, incompetence is not solely within the child. For example, people do not expect a second grader to be able to do long division and the chances are that the child's skill level would not permit his doing long division. There is no discrepancy between expectations and skill level for the second grader and therefore his inability to perform long division is not viewed as incompetent. However, people do expect a tenth grader to possess skills sufficient to perform long division. If he cannot, there is a discrepancy between the expectations of others and his skill level and he would be described as "incompetent." Competence and incompetence as used in this paper are relative terms, they refer to how other people in the child's ecology view the inability or ability to perform a task.

Although intervention at this point is a premature discussion, it should be noted that intervention can take place at any point in that interaction. It may not be reasonable to adjust the child's skill level but rather an intervention

involving expectations might be appropriate. At any rate, in the model proposed in this paper, the child is not the sole recipient of intervention. It is an interactive model and therefore it is the interaction between child and environment that must be assessed.

The nature and structure of the task are also related to the definition of appropriateness/inappropriateness and competence and incompetence. The structure of a task refers to the conditions under which the task is to be accomplished. (Liaison Teacher-Counselor, no date) Obviously if an eleventh grade English teacher required an exhaustive explication of the character of King Lear, many students would be considered incompetent, some more incompetent than others, depending on previous skill levels. As the assignment became more structured when the teacher provided students with explanation and direction on how to look at a dramatic character and in particular Lear, fewer and fewer students would be judged incompetent and at the same time, increasing numbers would be viewed as competent. As the discrepancy between the skill level and the structure of task close for individual students, competence increases.

The final variable that is related to appropriateness and competence is the contingencies of reinforcement. Obviously, if the student is reinforced for a behavior it will be maintained or increased. In particular, when assessing adolescents a behavior may be reinforced by an agent in one of his environments which may not be the environment from which a complaint originates. For example, the school or family may be the environment in which the behavior of concern is exhibited e.g. poor attendance or late hours, but it is the peer group that controls the contingencies of reinforcement. Since truant school behavior or the keeping

of later hours may be a behavior valued by the adolescent's peers, it may be maintained because it is reinforced by other adolescents. In addition, oppositional behavior toward constraints of other adults may also be reinforced by the adolescent's peer group. Similarly, truant behavior and keeping long hours may be reinforced and therefore maintained by the negative attention it receives from adults. An ecological assessment assumes that all environments of the student must be examined, not just the environment issuing the complaint. Thus, the peer group and its contingencies would be looked at as well as home and school environments. (Ihle, 1975)

IV Collecting Data in an Ecological Model:

Mapping the Ecology

Mapping the child's ecology refers to the delineation of the primary environments within which the child operates: at a minimum his school, peer, family and community (including church, youth groups, neighborhood, paper route, etc.).

Because at least one of the environments has made a complaint, this represents in an ecological model a discrepancy between expectation (or structure of the skill) and the behavior of the child.

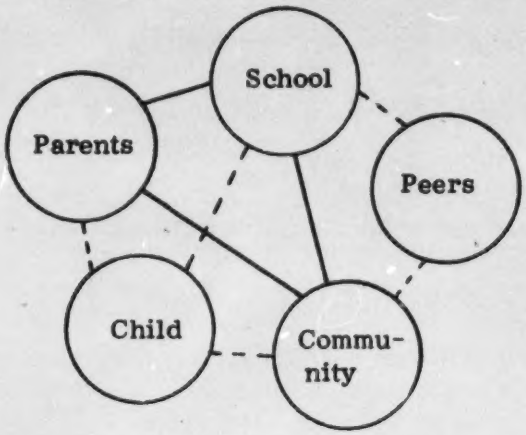
Therefore, a first task in mapping the ecology of the child is to determine where these discrepancies exist; in other words where there is a poor "fit" between child and at least one environment which has led to the referral. It would not be unusual to find that discrepancies exist in environments which have not resulted in a formal referral but which are disturbing to the participants. Similarly, it is important to look at the environments in which the child is successful. Therefore, it is necessary to begin to look at the community, school, and family at a minimum as soon as a complaint is identified in any one of the environments.

One way of beginning to map the ecology of the child is to look at areas within the child's environments where there are smooth fits. Academic, vocational and social skills, such as behavior control, use of leisure time, assertiveness with peers, relationships with peers of the opposite sex, are some of these competencies. Each of these can be assessed in various environmental settings. In each case, the expectations, structure and nature of the task involved and contingencies of reinforcement must be examined. When a discrepancy between the expectations

of various people or the structure of the task and skill levels in various environments is found, it should be noted. A map of the child's ecology then will be a schema of behaviors and environments with the points of discrepancy noted.

At least three maps need to be drawn for the child: one illustrating "fits" and "discrepancies" between the expectations of different environments for a behavior and the actual behavior itself, one to map "fits" and "discrepancies" between expectations for a behavior each environment has for the other and for itself and a third map to illustrate "fits" and "discrepancies" between the structure of the task and the child's skill level.

Schematically, these "fits" and "discrepancies" might be drawn as follows: Each environment would be represented as a circle.



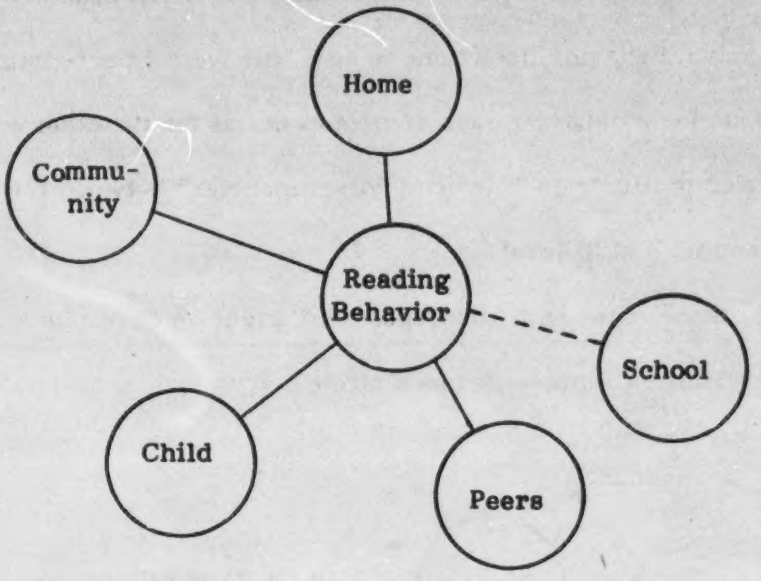
Map for Expectations in academics for different environments

For this map, fits between two environments regarding expectations they have for academics are represented by a solid line; discrepancies by a broken line. In the map presented here, there are three "fits" between environments in terms of expectations for academics: between parents and community, community and school and parents and school.

Maps would also need to be made to illustrate discrepancies and fits between specific behavior and expectations for those behaviors in the various environments.

Another map needs to be drawn illustrating fits and discrepancies between structure of the task and skill level.

Although the technique of mapping is the same as the previous example, the maps may look slightly different. For example, a map which illustrates the fits and discrepancies between expectations and actual behavior might look as follows:



By asking several key questions, one can determine where the most appropriate interventions might be made.

One question is in how many different settings a given discrepancy is noted. For example, if discrepancies between expectations and social skills were noted across parents, peers, and school and community, intervention is probably most reasonable with the child; in other words intervene in some way to improve the child's social skills in order to close the discrepancy between expectation and behavior. In other cases where there is a discrepancy between expectation and the child's behavior, in one class in school, for example, intervention may possibly be more appropriate with the expectations of the teacher.

Another related question that has to be asked is how many other participants in the setting demonstrate the same discrepancy. This is a more difficult question to answer without mapping other participants' ecologies but if the target child's behavior seems to be setting specific e.g. discrepancies are only noted in one ecology, it is sometimes useful to map a random selection of other participants in that specific environment. The more participants whose interaction demonstrates a similar discrepancy as the target child's, the more appropriate it may be to intervene with either the expectations or structure of the task and not with the child.

It is important to note that the purpose of doing an ecological assessment is to identify appropriate places for intervention. The purpose is to smooth the "fit" of the interaction between the child and his environment. Intervention needs to be at the place where it is most reasonable to smooth the interaction.

Smoothness of fit can occur in at least three ways:

1. The child does not change but the environment changes its expectations or restructures the task to meet the child at his current functioning level.
2. The environment does not change its expectations or the structure of the task but the child's behavior and skills change to meet the expectations and to function in the given structure of the task.
3. The child changes his behavior and skills but the environment also adjusts its expectations and task structure.

V Toward an Ecological Assessment of an Adolescent

An extended example will be used to illustrate the ecological-behavioral assessment. This example is taken from our experiences working with "emotionally disturbed" students within the HI-ED unit of the Madison Public Schools. Because we are trying to illustrate how this conceptual model might be used, the example may seem artificial. In order to understand the model, though, it probably is important to make clear cut distinctions between the different phases of the assessment. In practice, some of the data gathering may occur at the same time, or not follow exactly in the sequence presented. It is important, however, to initially focus on an overview of the student's involvement with the different systems. Furthermore, it is important to gather fairly systematic descriptive information on the student's interactions with his environment and the expectations he has for himself and that others have for him. Because the setting of reasonable expectations is dependent on all the previously gathered information, it should be the last step in the assessment.

The assessment model is divided into five major phases.

A. Referral

1. Engaging the environment for data collection on perceptions of the problem.
2. Gathering information from the system which triggered the referral.
3. Gathering information from the systems which support the referral.
4. Gathering information about the systems which do not support the referral.
5. Mapping the information.

B. Expectations

1. Gathering information about expectations in problematic situations.

2. Gathering information about expectations in successful situations.

3. Mapping the expectations.

C. Behavioral Descriptions

1. Data collection on the interactions and skills of the people involved in the problematic situations.

   a. present data

   b. historical data

   c. interactional analysis

   d. functional analysis

2. Data collection on the interactions and skills of the people involved in successful situations.

   a. present data

   b. historical data

   c. interactional analysis

   d. functional analysis

3. Assessment of skills in specific settings.

D. Summary of Data

E. Setting Reasonable Expectations

A. Referral

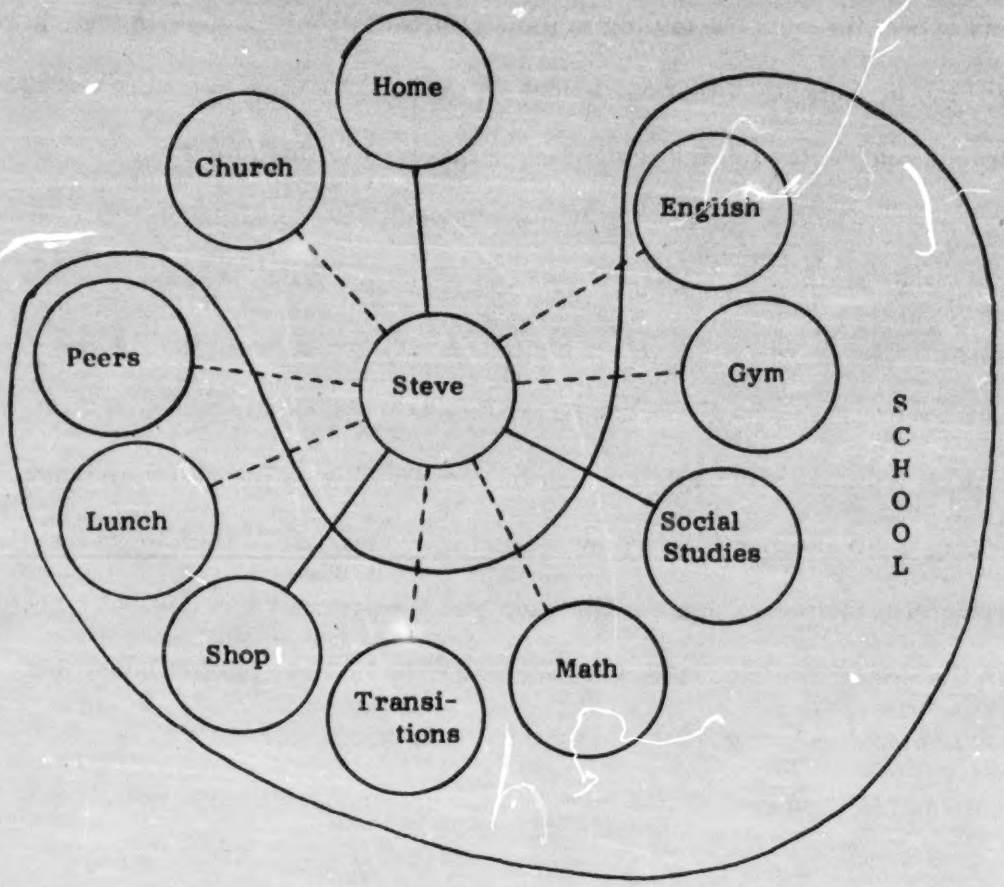
The first step in an ecological-behavioral assessment is to simply look at and respond to the information the referral source provides. Since there is a strong possibility that the referral source, a person within the adolescent's natural environment, would be involved in any type of intervention that might be designed, it's important that he feels his concerns are being considered.

Steve is a 13 year old boy who has had problems in school for many years. His English teacher came to the support staff concerned that Steve was not doing well in her class: "he was aggressive and didn't have any respect for authority." She felt that as a result, he would not work on any of his assignments. Ms. Noyce said that Steve was a chronic problem and that other people were also concerned about him. At this point the support staff member, Mr. Smith, acknowledged Ms. Noyce, the regular educator's concerns.

To get a wider perspective on Steve's involvements with other environments, Mr. Smith asked Ms. Noyce questions about the other people who had concerns about Steve. Ms. Noyce found that two of Steve's other teachers, his gym and math teachers, were feeling uncomfortable having Steve in their classes. Ms. Noyce was also aware that Steve only had a few friends at school and was involved in some activities at church.

When reviewing Steve's folder, Mr. Smith found that his parents report that he is not a problem at home. In fact, he is described as the most well behaved of their six children. There was no record of Steve being involved in any community activities except for church. After talking to Steve for a few minutes, Mr. Smith found that Steve didn't like Sunday school because he was the oldest in his class and his younger brother and sister were also in the same class.

A preliminary map of the systems Steve is involved with would be as follows:



The solid lines connect Steve with the different environments and settings which are generally thought of as having "smooth fits". The broken lines represent situations in which there's a "lack of fit."

This type of map provides a thumb-nail sketch of the types of involvements Steve encounters daily.

Data collection and acknowledgement of people's concerns about "lack of fit" within an ecological system do not stop after gathering general information from the referral source and briefly speaking to the student. All of the other significant people within the adolescent's life should be consulted, most of all, the adolescent himself (Liaison Teacher-Counselor, no date). Others to be included

would be his parents, peers, siblings, other teachers and school staff, and his Sunday school teacher. In talking to the significant people, consider their perceptions of the problematic situations before trying to move them to a more ecological understanding. After talking to the people involved in this situation, Mr. Smith found that Steve's gym teacher felt that he "doesn't respect authority" and "won't even try to do some of the sports." The social studies teacher's perception is that Steve is doing well in her class because he likes to discuss the material in small groups. The math teacher feels Steve is frustrated by the math assignments because he isn't smart enough to finish them as quickly as the other students. According to his teacher, Steve does well in industrial arts. He follows the directions and completes the assignments. The shop teacher does not see Steve as a problem within his class. During transitions between classes Steve is often identified by the principal as being in parts of the building that are not authorized for students and is frequently late to his classes. The cafeteria monitor feels that Steve tries to provoke some of the other students into teasing him. Many of the school staff feel that Steve's problems emanate from the home since there are several other children in the family who have problems in school.

During an interview Steve's mother reiterates that she does not have any problems with Steve at home. Therefore, she cannot understand why the school feels he is such a problem. Also, she cannot understand how Steve could get into trouble at school if he were well supervised. She manages to supervise all of her six children. She informs Mr. Smith that her children clearly know the limits in her home.

Since Steve's relationship is most open with the shop teacher, Mr. Smith asked Mr. Jensen to talk with Steve to try to elicit from Steve his impression

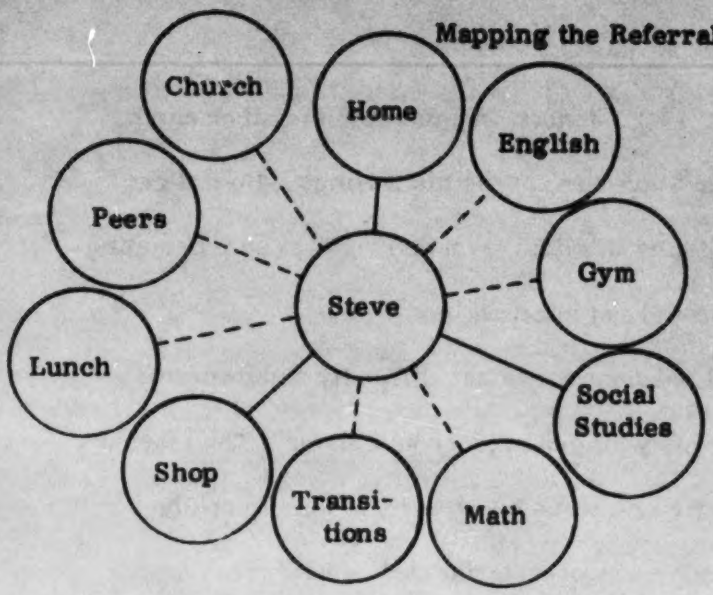
about school, friends and his family. Mr. Jensen was not able to gather much information because it is difficult for Steve to express his feelings. He did get the impression, though, that Steve found English, gym and math to be frustrating subjects for him, classes which he could not succeed in.

According to the Sunday school teacher, Steve has difficulty finishing his work because he gets distracted by his younger brother and sister. The teacher feels Steve is "capable of doing the written work because he is able to orally discuss the major points" of the Sunday school material each week.

Many people express concerns about Steve which must be acknowledged. Everyone's perception of the problem is different. There are major discrepancies between how significant people perceive Steve. This is understandable because everyone is viewing their involvement with Steve from a different perspective. By obtaining an overview of the involvement Steve has it becomes clear that the problem does not rest within the child, his teachers, his parents or his peers, but that the problem is a result of the "uncomfortableness" certain people are feeling with Steve. The map summarizes the perceptions people have about "the problem." (See Figure 1)

Looking at Steve's ecology one would find that the English teacher triggered the referral, the gym and math teacher, principal, lunchroom monitors and Sunday school teacher supported the referral. However, the industrial arts and social studies teachers and parents do not see Steve as having the kinds of problems others have identified.

Mapping the Referral Figure 1



Systems which DO NOT Support the Referral:

School:

1. **Social Studies Teacher**
2. **Shop Teacher**

Home:

1. **Parents**

Systems which Support the Referral:

Identified Problems - Perceptions of the Problem

School	
by English Teacher	**doesn't respect authority**
	doesn't finish work
	too aggressive
by Gym Teacher	**doesn't respect authority**
	doesn't try hard in gym class
by Math Teacher	**is not smart enough to complete assignments**
by Principal	**(transitions) often in wrong part of the building**
	late to class
by peers	
by lunch monitor	**provokes teasing from other students**
Community	
by Sunday School Teacher	**difficulty finishing written work**
	distracted by siblings
Student	
by Steve	**English, gym and math seem to be frustrating to him**

For some people within the ecology and often for the adolescent himself, the process of sharing perceptions, expectations and desires is difficult. For some, these behaviors may need to be shaped over time. Also, it may be that materials will need to be developed or adapted to promote and help shape these skills. Philosophically, we feel strongly that it is important for the adolescent to be involved in the assessment process as much as possible. In addition, research supports this view (Stuart, 1975). Because the adolescent is reaching adulthood he needs to be taught some of the skills necessary for adulthood e.g. decision making, problem solving, compromising, and communicating. Also, it is more likely that he will agree with the type of intervention if he takes an active part in the assessment of the problem. Then he knows his concerns are being listened to and that he has been included in the decision making. Finally, if school staff are to be child advocates then they need input from the child regarding his concerns.

To review, the first steps of the assessment are to respond to the referral; find out which other systems support the referral, and do not support the referral. Then the situations in which there are fits and lack of fits can be mapped. It should be noted that in this example the child is the focus of the mapping. Other people within the child's ecology may also be the focus of the map. For example one might want to map the fits and lack of fits between the mother's involvement with the school personnel, Sunday school teacher and son's peers. Start with people's present perceptions of the problem and then try to move them to a more ecological understanding.

B. Expectations

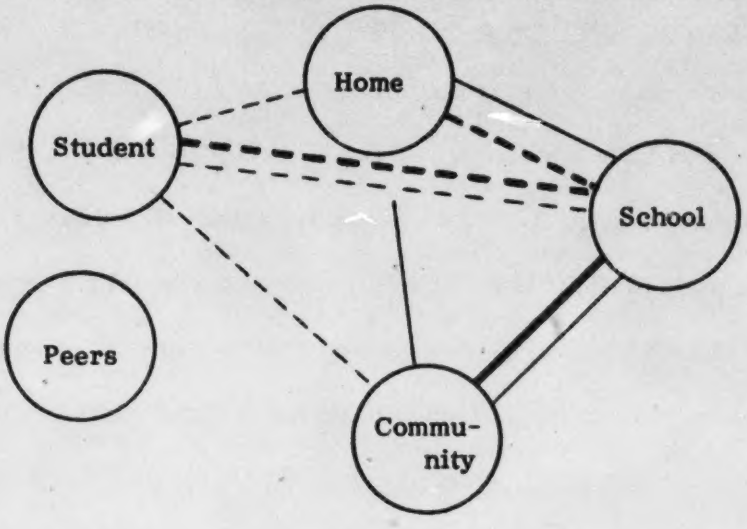
Essentially, when discussing expectations of others and for ourselves we are examining how we think people should behave. Often when there is a complaint from a particular environment, people within that environment vary in their expectation for each other. (Cantrell, personal communication, 1975). When a person is involved in many problematic situations, the expectations set for his behavior may be unclear. Judgements and decisions are made as to whether behavior is competent-incompetent, inappropriate-appropriate based on expectations of behavior in certain situations. (Weinberg, 1971) Often, though, expectations may not be considered as variables that can be changed or at least examined.

Expectations can be examined within a particular context. There are general expectations that the different environment, the school, home, and community have for student behavior within the broad school context. These expectations may involve such things as attending school, cooperating with rules, completing work. There could be, though, discrepancies between what general expectations different people have for students at school. In Steve's situation there are no discrepancies between the general expectations that the school and the home have for Steve. Both Steve's parents and his school have as expectations for students that they attend school regularly, follow rules and complete one's work.

In addition, these same environments have general expectations for what the school should be providing for students. Steve's parents expect the school to "closely supervise students every minute of the day." The school does see itself as responsible for students while they are in school, but does not expect

that they will be able to directly supervise every student throughout the school day, especially at the middle school and high school level. In this situation there is a discrepancy between the home and school's expectation for the supervision of students.

At the broadest level, the school environment, the expectations, as well as the school context are rather vaguely defined. Initially it may be important to develop an overview of the expectations people have set for each other across environments. By gathering this information the professional will then understand by which standards people are evaluating each other's behavior. These expectations for each environment can be mapped. A beginning map may look as follows:



Expectations for Students' School Behavior (thin lines)

attend school, follow rules

finish work

Expectations for School Staff's Behavior (thick lines)

continually supervise students

The thin solid lines represent fits in expectations for students' school behavior and the thin broken lines represent discrepancies. Fits between expectations for school staff's behavior are represented by solid heavy lines and the discrepancies are noted by broken heavy lines.

As stated earlier the adolescent functions in three major environments: the home, the school and the community. Because adolescents are so mobile, it is often difficult to clearly separate the different groups from one another. For example, the peer group may be at school and at home. It is this mobility pattern which often makes it so diffcult to assess the adolescent interactions with his environment. He may be expected by one environment to behave in a particular way in another environment. Much of the research, though, from ecological and behavioral literature support the notion that behavior is significantly influenced by the variables within each setting, (Wahler, 1971, 1975) and in the case of the adolescent by the variables that may overlap from each environment to environment.

Before we go further, it is important to describe a model for examining more specific expectations. Within the educational context, school staff can evaluate their expectations of a student. This educational context could include many of the following variables with which the child interacts: 1) the physical environment, 2) the instructional materials (including the structure of the task), 3) the teacher's behavior, 4) the peers' behavior, and 5) the student's behavior. After looking at expectations in the narrow context, they could then be examined from the broader perspective again.

The three major environments of home, school and community can further be divided into settings, such as meal time at home, math class at school, and

sports hour at the youth center. Settings can then be divided into activities within the settings, such as eating dinner, doing independent seat work, and playing basketball.

In the next example the educational context in which a teacher and a student set expectations for themselves and each other will be mapped. For this discussion, the educational context focuses on the interacting variables within a specific activity. In this particular situation the activity is independent work on a project within English class. Ms. Noyce is the teacher and Steve is the student.

Environment - School

Setting - English Class

Activity - independent seatwork on English project

Ms. Noyce's Expectation for Steve:
1. To work independently and quietly for an hour on the English project.

Steve's Expectation for Himself:
1. To work independently and quietly for a ½ hour on the English project.

Ms. Noyce's Expectation for Herself:
1. To spend a few minutes monitoring each student's work including Steve's.

Steve's Expectation for Ms. Noyce:
1. To spend 10-12 minutes working with him alone.

Environmental Variable

Physical Environment	Instructional Materials	Teacher Behavior	Steve's Behavior	Peer Behavior
1. Crowded English class	1. Assignment sheet 2. Library books 3. Textbook 4. Workbook 5. Colored pencils	1. Spends a few min. with each student answering questions	1. Works for ½ hour and then talks to desk partner	1. Desk partner initiates conversation with Steve after ½ hour

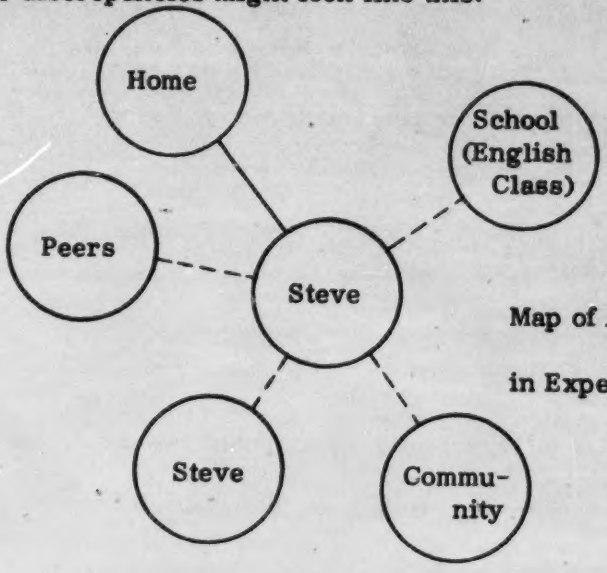
Within this English activity, we can describe the context in which expectations can be evaluated. Not only is it important for the school staff person to evaluate her expectations of the students, but it is also important for the staff member to evaluate her expectations of herself. Likewise, it is important for the student to evaluate the expectations he has for himself and those he has for the teacher.

As stated earlier, professionals measure a student's competence and appropriateness against the expectations we have set for him. If we set high expectations for him and he doesn't meet them, then he is viewed as being incompetent. In other words, the expectations professionals set for the student directly effect our evaluation of him. Similarly, if we have one set of expectations for the student and he doesn't have that particular set of skills, but has others, we may still think of him as being incompetent.

For example, in English class Steve's teacher, Ms. Noyce, expects him to spend an hour a day working on his project with minimal interaction with the teacher. On the other hand, Steve expects his teacher to come and work with him for 10-15 minutes of the half hour that he works. There is a discrepancy in expectations which has most likely caused a "lack of fit" in their relationship if each party is operating as his own expectations would suggest.

Neither person is right or wrong, competent or incompetent. Neither Ms. Noyce nor Steve have a monopoly for defining appropriate or inappropriate expectations. One way to look at differences in expectations is to consider the expectations of all people involved in the situation. For example, Steve may not feel it is reasonable to ask him to spend an hour working on the English project because he wants to spend part of that time talking with his friend. He also gets distracted

when working for more than 45 minutes. The English teacher may not feel it's worth Steve's time to only spend a half hour a day on the project because just as soon as he gets started for the day he has to stop. Neither set of expectations are right; they are just different from each other. That difference needs to be noted in the assessment of all settings in which there are discrepancies. A map of the discrepancies might look like this:



Map of Agreements and Discrepancies in Expectations regarding English Class

There were other variables interfacing with Steve and his teacher during the English activity, such as the physical setting, instructional materials, including the task, and peer interactions.

C. Behavioral Descriptions

To further assess the ecology it is important to consider Steve's interaction with the same kind of variables previously mentioned, peers, teachers and parents. One can utilize Steve's descriptions of the interactions as well as other's. This can be done not only for one activity but for all other significant activities, problematic as well as successful ones.

In assessing the interaction and skills of the student as well as the others involved one needs to look at three different dimensions of behavior.

1. interactions between significant variables within an activity
2. social skills within and across
3. functional analyses of behavior in and across settings.

Interactions

The first level of analysis after mapping the expectations for specific activities or settings is to gather descriptive information on the interactions between the different variables within that activity: the physical environment, task, peer and teacher behavior. This information can be gathered from the student himself, the teacher or peers. Some of the questions one might ask are: How do Steve and/or his teachers describe his response to the instructional materials? Does he find them easy to follow, uninteresting, challenging, confusing, etc.?

During this time what are Steve's interactions with his teacher? What are her responses to him? Does Steve seek guidance and attention from the teacher? When does Steve receive attention from the teacher? Does he seem to get the teacher's attention when he stops working and is talking to his neighbors?

Does the teacher describe her interactions with Steve as being helpful, prodding? What are the frequency, intensity, magnitude and consequences for Steve's as well as the teacher's and peers' behavior. Does Steve or others describe him as needing physical or auditory distance from other students to be able to concentrate to stay on task? Do other physical factors in the room such as size of group, size of room, effect Steve's behavior?

What are the interactions between Steve and his peers? Who initiates conversation during class? What are the others' responses? Describe the type of interaction which transpires. Does Steve see them as positive exchanges?

What are Steve's interactions with peers, teachers and academic materials at other times during the day? Are they similar or different? Are they described as "problematic" or "successful?" Are the expectations or structure of the tasks different or similar? Does Steve relate his interactions in this class to his peers, his family? What are their responses? Does the teacher relate her experiences with Steve to other people, his family, his peers, other school staff? What are their responses? What is Steve's history of interacting with peers, teachers and materials in a particular setting? What is the teacher's history of interacting with students, parents and school staff in this setting and across other settings?

Social Skills

What kinds of social skills are "required" to be able to meet the expectation of this setting or activity. Does Steve have a history of possessing these social skills in this setting? In other settings? To what degree of competence? Does Steve need to know how to ask questions of the teacher, how to show the teacher he appreciates what he/she is doing for him? Does Steve need to know how to

gracefully terminate conversations with peers during class? Is there presently a need for these skills in other situations, in future situations? Does the student possess these skills, but not use them in this situation?

What are the skills of the other people involved in this setting? Under what conditions can the teacher praise Steve for his work, organize the classroom so as to individualize instruction, state directions clearly, follow-through and set limits? In what areas is there a workable match between the teacher's skills and the student's skills?

What are the social and academic skills of the students in Steve's class? Do these students have skills similar to Steve's? How are the skill's different or the same?

The reader is referred to Freedman (1974) for an extensive discussion of the social skills which may be necessary to deal with problem areas adolescents have identified. She discusses skills relating to "getting along with teachers, peers, parents, employers, police as well as skills relating to use of leisure time, self control, getting out of bad moods," in a variety of different environments.

One way to find out whether a student possesses a certain type of skill across many settings is to map the skill and the structure of the task in using that skill in different environments.

For Steve, we might map his on task behavior during different activities in relation to the structure of the tasks. (See Appendix A)

This kind of map could be drawn for any of Steve's skill areas. One could then find the conditions under which Steve could perform those skills.

Also, Steve's abilities in problem solving and decision making as well as those of other people in this environment should be examined. Once people possess particular skills they need to decide when to use them.

We have begun to ask questions on two dimensions. First, what does the behavior look like and what are the variables related to it? Then, what are the social skills necessary to meet the present expectations of these situations. Both of the above ways of analyzing behavior examine the topography of behavior, the physical movements that are involved in the behavior, talking, turning around, following directions.

Effects of Behavior

There is another important characteristic of behavioral responses used to analyze and classify behavior. This characteristic categorizes responses in terms of the similar effects they have on the environment. For example, avoidance behavior is often characterized by many behaviors that look different e.g. staying home from school because of "illness," "skipping" school, being in unauthorized parts of the building during class time, but all the behaviors have similar effects on the environment; they can all be called avoidance of school responses.

Another example might be the coercive kinds of demands made by Steve to peers or to adults which may get fairly immediate compliance from them. These coercive behaviors may take the form of emotionally toned verbal demands or treats, physical displays or physical threats. The physical aspects may be described somewhat differently but they all may receive the same kinds of consequences from the environment, compliance to Steve's demands.

If one focuses on the effect the student's behavior has on the environment instead of on the behavior itself one notices that Steve may be reinforced by other's compliance and that their compliance may be reinforcing his demands. Although this paper does not directly address the issues of treatment, in this situation one may want to focus intervention in terms of teaching Steve other ways he can modify the behavior of his peers and adults; other ways he can get them to do things for him. This type of analysis would lead one to look at the importance of Steve's knowing how to change his environment to get the things he wants. It is important to look at this kind of behavior across settings and historically. Steve may seek compliance from others by being coercive to his parents, the principal, a storekeeper, peers and his teachers. It is also important to take a historical view to see whether this problem has been noted previously. According to Oregon Research Institute, (Patterson, 1973) coercive behavior is very often a reciprocal interactive phenomena. This would again suggest that one must examine the child's environments and his interactions with others to be able to assess the ecology. It is, also at this point when examining the effects of behavior on the environment, that one must interface this kind of analysis with the information gathered on the social skills of Steve and those people within his environment.

This extended example has only touched upon assessing a very limited part of Steve's life. To do a complete assessment many other aspects of Steve's ecology must be examined following the same kind of format of question asking regarding Steve and the environments as presented here.

D. Summary

The following is a hypothetical summary of the assessment of the previous extended example. By looking at the initial problem for which the teacher referred Steve, noncompletion of tasks, and "lack of respect for authority," one could easily assess the situation by taking data on the amount of time Steve spent working. If Steve was actually only working 25-50% of the time "he was supposed" to be working, then a program could be designed to increase his on-task behavior. The above assessment only considers two variables, Steve's behavior and the staff member's expectations for his behavior.

As the extended example points out, many variables within a classroom and within the student's other environments, may affect even a simple behavior like staying on task.

Some of the possible causes of lack of fit within Steve's ecology.

Discrepancies in Expectations

1. There is a discrepancy between Steve's and his teacher's expectations for each other's behavior.
   a. Steve wanted more teacher attention and to do less work.
   b. His teacher wanted to maintain her low level of interaction with Steve and wanted him to finish his assigned work.
2. There is a discrepancy between how much supervision the home expects from the school and how much supervision the school feels they can provide.

Interaction with the Physical Environment

1. Limited space within the English classroom hindered the teacher from being able to move around the class quickly.

2. Large numbers of students prevented the teacher from spending a lot of time with each student.
3. The noise in the classroom made it somewhat difficult for Steve to concentrate.

Interactions with Teachers

1. Steve has some slight difficulty following oral directions given to a group both at school and in church.
2. Steve has difficulty doing long written assignments when they are not broken down into smaller parts both in math, English and at Sunday school.

Interactions with Peers

1. Steve has difficulty relating to peers in academic situations in which he is "not doing well" both at school and church.
2. Steve has difficulty relating to peers in unstructured settings such as gym and lunch.

Some of the possible assets in Steve's ecology.

Similarities in Expectations

1. Generally the home, school and community agree on what the expectations are for student behavior.

Interactions with the Physical Environment

1. Steve can respond in classroom situations which are quiet.
2. Steve can respond in situations in which there is some physical distance between students' desk.

Interactions with Adults

1. Steve can follow oral directions when they are clear and when the teacher stands near him when she is giving them.
2. Steve can complete tasks either at home or at school when they are within a meaningful context and when the task is broken down into specific steps.

Interactions with Peers

1. Steve relates fairly well to other students in structured situations in which he has information about the topic being discussed, such as in social studies, industrial arts, and with his siblings.

Setting Reasonable Expectations

Setting reasonable expectations, then, becomes the process of examining all the information gathered about an adolescent and his ecology and making decisions about how to utilize the environmental resources and assets to optimize the functioning of the adolescent within his natural environment.

Reasonable Expectations for Steve's Ecology May Be:

1. Steve's teacher will stand near him at the beginning of each class period when she explains the work to be accomplished for the day.
2. His teacher will come over to talk to him for a few minutes twice during the class period when she sees Steve is working.
3. At least twice during the hour class, Steve's teacher will give him a nonverbal reinforcer such as a smile across the room, when she sees he is working.
4. Steve will work on resisting the suggestions and challenges from his neighbor.
5. Steve will accept some extra help one hour a day from the support staff on gaining social skills with peers. He will initially practice these skills in social studies and industrial arts where he feels most successful.
6. Steve and his teacher will contract each week on how much work he needs to do.
7. It is anticipated that the shifting of the expectations will have little effect on the total functioning of his class. One needs to carefully watch though, that Steve's classroom neighbor's behaviors do not escalate without the reinforcement of talking to Steve.
8. Parents and school staff will have bi-weekly conferences to review Steve's progress.

VI Decision Making in an Ecological Assessment Model: Post Script

In preceding sections of this paper, the considerations and information required for decision making have been discussed. It is probably clear that like all other assessment models, this one is not value free. Decisions regarding what are reasonable expectations for the child, for example, require the assessor ultimately to make a value judgment. Although we have attempted to free ourselves from an assessment model which only values the perceptions of the person reporting the problematic situation and have instead suggested that the perception of all persons involved in the problematic interactions be considered, this again, represents a value judgment on our part. That is, that the time involved in the long term is worth it: that the decision making emanating from such an assessment is useful.

Another value judgment that needs to be recognized when considering an assessment model as one suggested here is that the status quo may not be the most therapeutic situation for the student. Administratively it may insure a smoother running school if the "problem" is seen as resting solely with the child. With this view, no one has to make a change except the child.

However, within the parameters of the assessment model suggested here, it is possible that several agents within the child's environment must change. Change may mean that "things aren't going so smoothly" for awhile. People have to change perceptions, ways of interacting, etc. and an adjustment time may be required before the classroom or school begins functioning as smoothly

as before. This is not a value free judgment. The implication here is that we believe that the long term effects of such an environmental "uneasiness" is ultimately more helpful for all parties involved than an assessment model which views the child as the only target of change.

This proposed model also has implications for the referral process. Unlike former referral systems, the child alone can no longer be referred for evaluation. Rather, the child along with the child's environments are referred. Implicit in every referral made under an ecological model of assessment is that the referral agent is referring his environment for evaluation. People apart from the environments in which they function would no longer be referred.

Bibliography

Adams, H. E., Unikel, I. P. Issues and Trends in Behavior Therapy. Springfield, Ill.: C. C. Thomas, 1973.

Alexander, J. F. and Parsons, B. V. Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. Journal of Abnormal Psychology, 1972, 31, 3, 219-225.

Anderson, S. B., Ball, S., Murphy, R. T., and Associates. Encyclopedia of Educational Evaluation. San Francisco: Jossey-Bass, 1975.

Atthowe, J. M., Jr. Behavior innovation and persistence. American Psychologist, 1973, 28, 34-41.

Baer, D. M. A note on the absence of a Santa Claus in any known ecosystem: A rejoinor to Willems. Journal of Applied Behavior Analysis, 1971, 7, 1, 167-170.

Barclay, J. R. System-wide analysis of social interaction and affective problems in schools. In P. O. Davidson, F. U. Clark, and L. A. Hamerlynck (Eds.) Evaluation of Behavioral Programs in Community Residential and School Settings. Champaign, Illinois: Research Press, 1974.

Barker, R. Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior cited in Stodolsky, 1971.

Barr, K. L. and McDowell, R. L. Comparison of learning disabled and emotionally disturbed children on three deviant classroom behaviors. Exceptional Children, 39, 1972, 60-62.

Beller, E. K. Introduction: The function and assessment of clinical records. Clinical Process. New York: Free Press of Glencoe, 1962.

Brown, D. G. (Ed.). Behavior Modification in Child, School and Family Mental Health: An Annotated Bibliography. Champaign, Ill.: Research Press, 1972.

Brownstone, J. E. and Dye, C. J. Communication Workshop for Parents of Adolescents. Champaign, Ill.: Research Press, 1973.

Burns, K. and Friedman, S. In support of families under stress: A community based approach. The Family Coordinator, in press.

Burrello, L. C., Tracy, M. L., and Schultz, E. W. Special education as experimental education: A new conceptualization. Exceptional Children, 40, 1973, 29-34.

Cantrell, M. L. Academic Programing in the Re-Education School. Nashville, Tenn: The Information-Dissemination Office, Tenn. Re-Education Program, Tenn. Dept. of Mental Health, 1971.

Cantrell, M. The heuristic: An explanation. Unpublished article, Prevention-Intervention Project, 3411 Belmont Blvd. Nashville, Tennessee 37215, no date.

Cantrell, M. Personal communication, March 17, 1975.

Cantela, J. R. and Kastenbaum, R. A reinforcement survey schedule for use in therapy, training and research. In E. J. Thomas (Ed.) Behavior Modification Procedures: A Sourcebook. Chicago, Illinois: Aldine, 1974.

Clement, R. L. Some characteristics of seven child behavior checklists: A review and a proposed alternative. Unpublished paper, Psychology Department, University of Wisconsin.

Cottle, W. School Interest Inventory. Boston, Houghton Mifflin Co., 1966.

Cunningham, M. A. The reliability of rating scales for assessing the behavior of disturbed children in a residential unit. Journal of Child Psychology and Psychiatry, 1971, 12, 289-304.

Davids, A. Effects of aggressive and non-aggressive male and female models on the behavior of emotionally disturbed boys. Child Development, 1972, 43, 1443-1448.

Dickson, C. R. Role of assessment in behavior therapy. In McReynolds, P. (Ed.) Advances in Psychological Assessment Vol. 3. San Francisco: Jossey-Bass Publishers, 1975, 341-388.

Dunn, L. M. (Ed.) Exceptional Children in the Schools: Special Education in Transition. New York: Holt, Rinehart, and Winston, Inc., 1973.

Fixsen, D. L., Wolf, M. M., and Phillips. E. L. Achievement place: A teaching-family model of community-based group homes for youth in trouble. In L. A. Hamerlynck, L. C. Handy, and E. J. Marsh (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Ill: Research Press, 1972.

Freedman, B. J. An Analysis of Social-Behavioral Skill Deficits in Delinquent and Non-Delinquent Adolescent Boys. Unpublished doctoral dissertation, University of Wisconsin, Dept. of Psychology, 1974.

Gambrill, E. D., The use of behavioral methods in a short term detention setting. Paper presented at the annual meeting of the Association for Advancement of Behavior Therapy. Chicago, 1974.

Gambrill, E. D., Thomas, E. J. and Carter, R. D. Procedure for sociobehavioral practice in open settings. In E. J. Thomas (Ed.) Behavior Modification Procedures: A Sourcebook. Chicago, Illinois: Aldine, 1974.

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Graziano, A. M. Behavior Therapy with Children. Chicago, Ill.: Aldine Publishing Company, 1973.

Green, J. K. and Morrow, W. R. Precision social work: General model and illustrative projects with clients. In E. J. Thomas (Ed.) Behavior Modification Procedure: A Sourcebook. Chicago, Illinois: Aldine, 1974.

Gump, P. V. The Classroom Behavior Setting: Its Nature and Relation to Student Behavior. Final report to U. S. Office of Education, Project No. 2453, Contract No. OE-4-10-107.

Hobbs, N. Helping disturbed children: Psychological and ecological strategies. American Psychologist, 1966, 21, 1105-1115.

Hobbs, N. The Futures of Children. San Francisco: Jossey-Bass, Inc., 1975.

Hops, H. and Cobb, J. A. Survival behaviors in the educational setting: Their implications for research and intervention. In L. A. Hamerlynck, L. C. Handy, and E. J. March (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Illinois: Research Press, 1972.

Ihle, Richard. The ultimate educator. Wisconsin Journal of Education, December-January, 1975, 22-27.

Jayaratne, S., Stuart, R. B, and Tripode, T. Methodological issues and problems in evaluating treatment outcomes in the family and school consultation project 1970-1973. In P. O. Davidson, F. W. Clark and L. A. Hamerlynck (Eds.) Evaluation of Behavioral Programs in Community, Residential and School Settings. Champaign, Illinois: Research Press, 1974.

Johnson, S. M. and Bolstad, O. D. Methodological issues in naturalistic observation. Some problems and solutions for field research. In L. A. Hamerlynck, L. C. Handy, and E. J. Mash (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Illinois: Research Press, 1972.

Jones, R., Reid, J. B., and Patterson, G. Naturalistic observation in clinical assessment. In McReynolds, P. (Ed.) Advances in Psychological Assessment, Vol. 3. San Francisco: Jossey-Bass Publisher, 1975.

Kanfer, F. H. and Saslow, G. Behavior diagnosis. Archives of General Psychiatry, 1965, 12, 529-538.

Keogh, B. K., and Becker, L. D. Early detection of learning problems: Questions, cautions, and guidelines. Exceptional Children, 40, 1973, 5-12.

Kuriloff, P. The counselor as psychoecologist. Personnel and Guidance Journal, 1973, 51, 321-327.

Lewin, K. Principles of Topological Psychology. New York: McGraw Hill, 1936 cited in Randhawa and Fu, 1973.

Lewis, U. W. Project Re-ed: The program and a preliminary evaluation. Prepared as a chapter in Unique Programs in Behavior Re-adjustment. C. Richard, (Ed.), no date.

Liaison Teacher-Counselor in the Re-Education Project. Tennessee State Department of Mental Health, no date.

Liem, G. R., Telbott, A. W., Cowen, E. L., Trost, M. A., and Izzo, L. D. Some correlates of early-detected emotional dysfunction in the schools. American Journal of Orthopsychiatry, 1969, 39, 4, 619-626.

Lisman, S. A. Ecological versus behavioral perspectives in treatment of the individual. A paper presented at the annual meeting of the Association for Advancement of Behavior Therapy. Chicago, 1974.

Lytton, H. Observation studies of parent-child interaction: A methodological review. Child Development, 1971, 42, 3, 651-684.

Majoribanks, K. Environment, social class, and mental ability. Journal of Educational Psychology, 1972, 63, 103-109.

Malone, D. R. and Christian, W. P., Jr. Adaptive behavior scale as a screening measure for special-education placement. American Journal of Mental Deficiency, 79, 4, 1974, 367-371.

Malouf, R. E. and Alexander, I. A. Family crisis intervention, a model and technique of training. In R. E. Hardy and J. G. Cull (Eds.) Therapeutic Needs of the Family. Springfield, Illinois: Charles C. Thomas, 1974.

Mauser, A. Learning disabilities and delinquent youth. Academic Therapy, 1974, 9, 389-402.

McFall, R. M. Strategies of behavioral training. Paper presented at American Psychological Association Annual Meeting, Washington, D. C., 1971.

McReynolds, P. Introduction. In McReynolds, P. (Ed.) Advances is Psychological Assessment Vol. 3. San Francisco: Jossey-Bass Publishers, 1975, 1-7.

Mitzel, H. & Rabinowitz, W. Assessing social-emotional climate in the classroom by Withall's technique. Psychological Monographs, 1953, 67, No. 18, 1-19.

Moos, R. Assessment and impact of social climate. In McReynolds, P. (Ed.) Advances in Psychological Assessment. Vol. 3. San Francisco: Jossey-Bass Publisher, 1975. 8-41.

Moos, R. and Trickett, E. Classroom Environment Scale Manual. Palo Alto, California: Consulting Psychologists Press, 1974.

Olson, D. H. Behavior modification research with couples and families: A system analysis, review and critique. Paper presented at the annual meeting of the Assocation for the Advancement of Behavior Therapy. New York, 1972.

O'Leary, K. D. and Kent R. Behavior modification for social action: Research tactics and problems. In L. A. Hamerlynck, L. C. Handy and E. J. Mash (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Illinois: Research Press, 1972.

Overline, H. and Quayle, K. Learning disabilities from an ecological perspective. Education, 1971, 92, No. 2, 28-33.

Patterson, G. R. A basis for identifying stimuli which control behaviors in natural settings. In Child Development, 45, 4, 1974, 900-911.

Patterson, G. R. Changes in status of family members as controlling stimuli: A basis for describing treatment process. In L. A. Hamerlynck, L. C. Handy and E. J. Mash (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Illinois, Research Press, 1972.

Pennypacker, H. S., Carl, H. K., Seaver, W. H. Cost efficiency and effectiveness in the early detection and improvement of learning abilities. In P. O. Davidson, (Eds.) Evaluation of Behavioral Programs in Community, Residential and School Settings. Champaign, Illinois: Research Press, 1974.

Pervin, L. Performance and satisfaction as a function of individual-environment fit. Psychological Bulletin, 1968, 69, 56-68.

Peterson, D. R. and Quay, H. C. Behavior Problem Checklist, 1967.

Pincus, A., and Minahan, A. Social Work Practice: Model and Method. Isasca, Ill.: F. E. Peacock, 1973.

Quay, H. C., Quay, L. C. Behavior problems in early adolescence. Child Development, 1965, 36, 215-220.

Randhawa, B. and Lewis, L. Assessment and effect of some classroom environment variables. Review of Educational Research, 1973, 43, 3, 303-321.

Rathus, S. A. A thirty-item schedule for assessing assertive behavior. In E. J. Thomas (Ed.) Behavior Modification Procedures: A Sourcebook. Chicago, Illinois: Aldine, 1974.

Reid, J. B., and Hendriks, A. F. C. J. Preliminary analysis of the effects of direct home intervention for the treatment of pre-delinquant boys who steal. In L. A. Hamerlynck, L. C. Handy, and E. J. Mash (Eds.) Behavior Change: Methodology, Concepts and Practice. Champaign, Illinois: Research Press, 1972.

Rhodes, W. A community participation analysis of emotional disturbance. Exceptional Children, 1970, 36, 309-314.

Rhodes, W. The disturbing child: A problem of ecological management. Exceptional Children, 1967, 33, 449-455.

Rhodes, W. Human ecology and human care. Unpublished paper, New Academic Village, Aug. 1974.

Rousseau, F. Behavioral Programing In The Re-education School. Nashville, Tennessee: The Information Dissemination Office, Tenn. Re-education Program, Tenn. Dept. of Mental Health, 1971.

Sarri, R. C. and Selo, E. Evaluation process and outcome in juvenile corrections: Musings on a grim tale. In P. O. Davidson, F. U. Clark and L. A. Hamerlynck (Eds.) Evaluation of Behavioral Programs in Community, Residential and School Settings. Champaign Illinois: Research Press, 1974.

Schechsman, A. Age patterns in children's psychiatric symptoms. Child Development, 1970, 41, 683-693.

Scott, M. M. Ecology of Learning. Final report to Southwest Educational Development Laboratory, Contract No. 03-006105-01 (718). August, 1971.

Shore, M. F. Youth and jobs: Educational, vocational and mental health aspects. Journal of Youth and Adolescence, 1972, 1, 4, 315-323.

Shore, M. F., and Massimo, J. L. After ten years: A follow-up study of comprehensive vocationally oriented psychotherapy. American Journal of Orthopsychiatry, 1973, 43, 1, 128-132.

Spwack, G., Spotts, J., Haimes, P. E. Devereux Adolescent Behavior (DAB) Rating Scale. Devon, Pa.: The Devereux Foundation, 1967.

Stodolsky, S. Ecological psychology or what's going on at Kansas. School Review, 1971, 79, 625-635.

Stuart, R. and Stuart F. Family Pre-counseling Inventory Program. Champaign, Illinois: Research Press, 1975.

Swap, S. M. Disturbing classroom behaviors: A developmental and ecological view. Exceptional Children, 1974, 11, 163-172.

Swift, M. S. and Spewack, G. Achievement related classroom behavior of secondary school normal and disturbed students. Exceptional Children, 1969, 35, 9, 677-686.

Tharp, R. G., and Wetzel, R. J. Behavior Modification in the Natural Environment. New York: Academic Press, 1969.

Trickett, E. and Moos, R. Personal correlates of contrasting environments: Student satisfactions in high school classrooms. American Journal of Community Psychology, 1974, 2, No. 1, 1-12.

Trickett, E. and Moos, R. Social environment of junior high and high school classrooms. Journal of Educational Psychology, 1973, 65, 93-102.

Trickett, E. J. and Todd, D. M. The high school culture: An ecological perspective. Theory Into Practice, 1972, 11, 1, 28-37.

Ullman, L. P. and Krasner, L. A Psychological Approach to Abnormal Behavior. Englewood Cliffs: Prentice-Hall, Inc., 1969.

Vacc, N. A. Long term effects of special class intervention for emotionally disturbed children. Exceptional Children, 39, 1972, 15-23.

Wahler, R. C. Some structural aspects of deviant child behavior. Journal of Applied Behavior Analysis, 1975, 8, 1, 27-42.

Wahler, R. and Cormier, W. The ecological interview: A first step in outpatient child behavior therapy. Journal of Behavior Therapy and Experimental Psychiatry, 1970, 1, 279-289.

Walberg, H. J. Predicting class learning: An approach to the class as a social system. American Educational Research Journal, 1969, 6, 529-542.

Walberg, H. J. Structural and affective apsects of classroom climate. Psychology in the Schools, 1968, 5, 247-253.

Walberg, H. J., and Anderson, G. J. Classroom climate and individual learning. Journal of Educational Psychology, 1968, 59, 414-419.

Weinberg, S. One Child: A Case Study. Nashville, Tenn: The Information-Dissemination Office, Tenn. Re-education Program, Tenn. Dept. of Mental Health, 1971.

Weinstein, L. Project Re-ed schools for emotionally disturbed children: Effectiveness as viewed by referring agencies, parents and teachers. Exceptional Children, 1969, 703-711.

Whaley, D. L. and Malott, R. W. Elementary Principles of Behavior. New York: Appleton-Century-Crofts, 1971.

Willems, E. P. Behavioral technology and behavioral ecology. Journal of Applied Behavior Analysis, 1974, 7, 1, 151-165.

Willems, E. P. Ecological orientation in psychology. In S. Cohen (Ed.) Child Development: A Study of Growth Processes. Itasca, Ill.: Peacock, 1971, 62-74.

Withall, J. The development of the climate index. Journal of Educational Research, 1951, 45, 92-99.

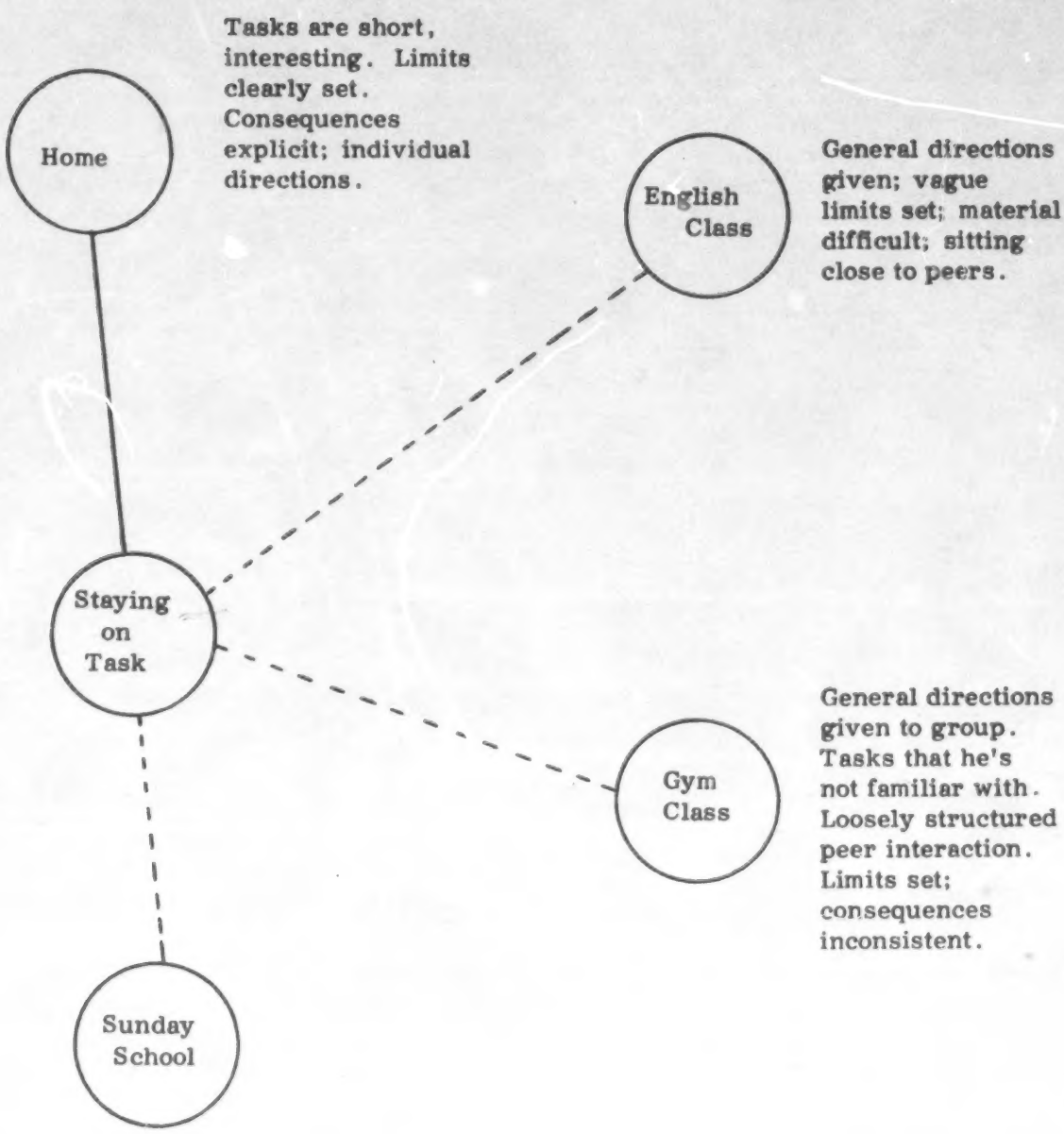
Wohlwill, J. The emerging discipline of environmental psychology. American Psychologist, 1970, 25, 303-312.

Wright, H. Recording and Analyzing Child Behavior cited in Stodolsky, S., 1971.

Zax, M. and Cowen, E. School programs, disturbed children: Project Reed. Abnormal Psychology: Changing Conceptions. New York: Holt, Rinehart and Winston, 1972, 508-515.

Appendix A

Map of Steve's On-Task Behavior


Tasks are short, interesting. Limits clearly set. Consequences explicit; individual directions.
Home
English Class
General directions given; vague limits set; material difficult; sitting close to peers.
Staying on Task
Gym Class
General directions given to group. Tasks that he's not familiar with. Loosely structured peer interaction. Limits set; consequences inconsistent.
Sunday School
General directions. Limits and consequences vague. Material with which he's had limited exposure.